Patent claims

1.-21. (cancelled)

22. (new) A method for checking a transmission quality between a first gateway and a second gateway in a packet network which is effectively connected to at least one packet-based switching system, the method comprising:

performing first method steps, comprising:

setting up a connection between a resource server and the first gateway by the packet-based switching system;

transmitting test information via the connection to the first gateway from the resource server;

looping back the test information in the first gateway;

transmitting back the looped-back test information to the resource server; and

evaluating the looped-back test information with regard to criteria relating to the transmission quality;

performing second method steps, comprising:

setting up a connection between the resource server and the second gateway by the packet-based switching system;

transmitting test information via the connection to the second gateway from the resource server;

looping back the test information in the second gateway;

transmitting back the looped-back test information to the resource server; and

evaluating the looped-back test information with regard to criteria relating to the transmission quality;

performing third method steps, comprising:

transmitting test information from a director function arranged in the resource server via the first gateway and the second gateway to a responder function arranged in the resource server by setting up a connection between the resource server and the first gateway by the packet-based switching system, and by setting up a connection between the first gateway and the second gateway by the packet-based switching system, and by setting up a connection

between the second gateway and the resource server by the packet-based switching system;

transmitting test information via the connections set up from the resource server to the first gateway, from the first gateway to the second gateway and from the second gateway to the resource server; and

evaluating the test information received with regard to criteria relating to the transmission quality; and

combining the results of the first, second, and third method steps for checking the transmission quality on the transmission section between the first gateway and the second gateway.

23. (new) The method in accordance with Claim 22, wherein the direction function and/or responder function are provided on director or responder modules arranged in the resource server.

24. (new) The method in accordance with Claim 22, wherein the test information is evaluated in the resource server or in the packet-based switch.

25. (new) The method in accordance with Claim 22, wherein a test report is created.

26. (new) The method in accordance with Claim 22, wherein a bidirectional connection is established between the resource server and one of the gateways.

27. (new) The method in accordance with Claim 22, wherein voice quality is evaluated in accordance with the ITU-T Standards P.861 or P.862.

28. (new) A method for checking the transmission quality between a first gateway and a second gateway in a packet network which is effectively connected to at least one packet-based switching system, the method comprising:

performing first method steps, comprising:

setting up a connection between a resource server and the first gateway by the packet-based switching system;

transmitting test information via the connection to the first gateway from the resource server;

looping back the test information in the first gateway;

transmitting back the looped-back test information to the resource server; and

evaluating the looped-back test information with regard to criteria relating to the transmission quality;

performing second method steps, comprising:

transmitting test information from a director function arranged in a resource server via the first gateway and the second gateway to a responder function arranged in the resource server by setting up a connection between the resource server and the first gateway by the packet-based switching system, and by setting up a connection between the first gateway and the second gateway by the packet-based switching system;

transmitting the test information via the connections set up from the resource server to the first gateway, from the first gateway to the second gateway;

looping back the test information in the second gateway; and

transmitting the looped-back test information via the connections set up from the second gateway to the first gateway and then from the first gateway to the resource server; and

evaluating the received test information with regard to criteria relating to the transmission quality; and

combining the results of the first and second method steps for checking the transmission quality on the transmission section between the first gateway and the second gateway.

29. (new) The method in accordance with Claim 28, wherein the direction function and/or responder function are provided on director or responder modules arranged in the resource server.

30. (new) The method in accordance with Claim 28, wherein the test

information is evaluated in the resource server or in the packet-based switch.

31. (new) The method in accordance with Claim 28, wherein a test report is created.

32. (new) The method in accordance with Claim 28, wherein a bidirectional connection is established between the resource server and one of the gateways.

33. (new) A resource server in a packet network, wherein the resource server can be controlled by a packet-based switch, the resource server comprising:

a director module; and

a responder module, wherein the modules comprising mechanisms for performing transmission quality checks according to the following method:

performing first method steps, comprising:

setting up a connection between a resource server and the first gateway by the packet-based switching system;

transmitting test information via the connection to the first gateway from the resource server;

looping back the test information in the first gateway;

transmitting back the looped-back test information to the resource server; and

evaluating the looped-back test information with regard to criteria relating to the transmission quality;

performing second method steps, comprising:

setting up a connection between the resource server and the second gateway by the packet-based switching system;

transmitting test information via the connection to the second gateway from the resource server;

looping back the test information in the second gateway;

transmitting back the looped-back test information to the resource server; and

evaluating the looped-back test information with regard

to criteria relating to the transmission quality;

performing third method steps, comprising:

transmitting test information from a director function arranged in the resource server via the first gateway and the second gateway to a responder function arranged in the resource server by setting up a connection between the resource server and the first gateway by the packet-based switching system, and by setting up a connection between the first gateway and the second gateway by the packet-based switching system, and by setting up a connection between the second gateway and the resource server by the packet-based switching system;

transmitting test information via the connections set up from the resource server to the first gateway, from the first gateway to the second gateway and from the second gateway to the resource server; and

evaluating the test information received with regard to criteria relating to the transmission quality; and

combining the results of the first, second, and third method steps for checking the transmission quality on the transmission section between the first gateway and the second gateway.

34. (new) The resource server in accordance with Claim 33, further comprising an interface to a test station.

35. (new) The resource server in accordance with Claim 33, further comprising mechanisms for evaluating results of transmission quality checks.

36. (new) The resource server in accordance with Claim 33, wherein voice quality is evaluated by the resource server in accordance with the ITU-T Standards P.861 or P.862.

37. (new) A gateway in a packet network comprising a loopback functionality for performing a method for checking a transmission quality between a first gateway and a second gateway in a packet network which is effectively connected to at least one packet-based

switching system, the method comprising:

performing first method steps, comprising:

setting up a connection between a resource server and the first gateway by the packet-based switching system;

transmitting test information via the connection to the first gateway from the resource server;

looping back the test information in the first gateway;

transmitting back the looped-back test information to the resource server; and

evaluating the looped-back test information with regard to criteria relating to the transmission quality;

performing second method steps, comprising:

setting up a connection between the resource server and the second gateway by the packet-based switching system;

transmitting test information via the connection to the second gateway from the resource server;

looping back the test information in the second gateway;

transmitting back the looped-back test information to the resource server; and

evaluating the looped-back test information with regard to criteria relating to the transmission quality;

performing third method steps, comprising:

transmitting test information from a director function arranged in the resource server via the first gateway and the second gateway to a responder function arranged in the resource server by setting up a connection between the resource server and the first gateway by the packet-based switching system, and by setting up a connection between the first gateway and the second gateway by the packet-based switching system, and by setting up a connection between the second gateway and the resource server by the packet-based switching system;

transmitting test information via the connections set up from the resource server to the first gateway, from the first gateway to the second gateway and from the second gateway to the resource server; and

evaluating the test information received with regard to

criteria relating to the transmission quality; and

combining the results of the first, second, and third method steps for checking the transmission quality on the transmission section between the first gateway and the second gateway.

38. (new) The gateway in accordance with Claim 37, wherein the gateway is designed as a media gateway, an access gateway or a residential gateway.

39. (new) The gateway in accordance with Claim 37, wherein the loopback functionality is implemented with the aid of separately addressable virtual ports used exclusively for test purposes.

40. (new) The gateway in accordance with Claim 37, wherein the loopback functionality is implemented with the aid of a TDM (time division multiplexer) loop.